DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018227
Date Inspected: 21-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

CWI Present:	☑ Yes	☐ No		**Inspected CWI report:**	☐ Yes	☐ No	☑ N/A	
Rod Oven in Use:	☑ Yes	☐ No	☐ N/A	**Electrode to specification:**	☑ Yes	☐ No	☐ N/A	
Weld Procedures Followed:	☑ Yes	☐ No	☐ N/A	**Qualified Welders:**	☑ Yes	☐ No	☐ N/A	
Verified Joint Fit-up:	☐ Yes	☑ No	☐ N/A	**Approved Drawings:**	☑ Yes	☐ No	☐ N/A	
Approved WPS:	☑ Yes	☐ No	☐ N/A					
Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A					

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 11DE to Segment 11EE (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point E3 (Bike Path side) and at Work Point E4 (Cross Beam side) for the Segment 11DE to Segment 11EE between Panel Point (PP) 106 to PP 107 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the

Lead Inspector and Engineer for review and disposition.

Segment 11CW to Segment 11DW (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Inspector Mr. Murugan Manikandan on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point W3 (Counter Weight side) and at Work Point W4 (Cross Beam side) for the Segment 9DW to Segment 9EW between Panel Point (PP) 103 to PP 104 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Bike Path at Paint Shop # 11

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path are identified as:

BK004A-020

The QA Inspector measured the flatness using 600mm long straight edge and observed flatness dimensions out of allowable tolerance.

The results of the inspection were informed to Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Segment 11EW (Corner Assembly hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA091-002. The welder identification was 046709 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as Edge Panel to Side Panel at hold back weld at work point W2. ZPMC performed repair welding in accordance with Welding Report Repair B-WR17349.

Segment 11DW (Corner Assembly hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA089-006. The welder identification was 046709 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification

WPS-345-SMAW-4G(4F)-FCM-Repair-1. ZPMC performed repair welding in accordance with Welding Report Repair B-WR17349.

Segment 11DW

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as SSD25-PP105-071/072. The welder identification was 046704 and observed welding in the 3F (Vertical) position using approved Welding Procedure Specification WPS-B-P-2113-FCM-1. The piece mark was identified as partial height diaphragm web to FL3 floor beam.

Segment 11DE

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as SSD25-PP105.5-171/172. The welder identification was 041713 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as Deck Panel extension stiffeners at FL3 location.

Segment 11DE

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as Seg072D-176/177. The welder identification was 041713 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as Deck Panel extension stiffeners at FL3 location.

Segment 11DE

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as Seg072E-025/026. The welder identification was 041713 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as Deck Panel extension stiffeners at FL3 location.

Segment 11DW to Segment 11EW

This QA Inspector observed the base metal repair welding at Bottom Panel and Side Panel Cross Beam side by Shielded Metal Arc Welding (SMAW) process. The welder identification was 040724 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification
WPS-345-SMAW-4G(4F)-FCM-Repair-1. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR1842.

Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

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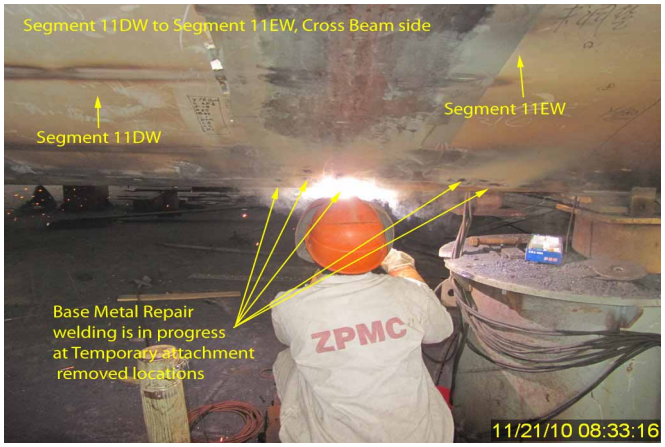

Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer